United States Department of Agriculture

Soil Conservation Service

Montana Agricultural Experiment Station

Bozeman, Montana

MONTANA WATER SUPPLY OUTLOOK

Snowpack and Streamflow Forecasts as of March 1,1985

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The Montana Water Supply Outlook is a publication of the U. S. Soil Conservation Service. The SCS administers the Cooperative Snow Survey Program in cooperation with other federal, state and private agencies, organizations, and individuals.

The report is prepared by SCS, Snow Survey and Water Supply Forecast Staff, Room 443, Federal Building, 10 East Babcock, Bozeman, Montana.

Montana streamflows may be below average

West of the Divide, all drainages above Missoula are expected to have below average runoff. The streams flowing into the Clark Fork downstream from Missoula and all of those in the Flathead and Kootenai River drainages should have near to a little below average streamflows.

East of the Divide, streams in the Missouri River headwaters and the main stem of the Missouri are forecast to have below average runoff this spring and summer.

Streamflows on tributaries north of the Missouri River and those in central Montana are predicted to be near to a little below average.

Runoff in the St. Mary's River basin should also be near average.

Below average runoff can be expected for all streams in the Yellowstone River drainage.

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SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
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10 East Babcock Street
Bozeman, MT 59715

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

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Administration proposes ending snow surveys

The President's 1986 budget request to Congress calls for termination of the Snow Survey and Water Supply Forecast activity within the U.S. Soil Conservation Service for fiscal policy reasons. If the President's budget request is enacted by Congress the snow survey program will be eliminated by the end of fiscal year 1986. This action would conclude over 50 years of federally coordinated and supported snow survey effort in the Western United States.

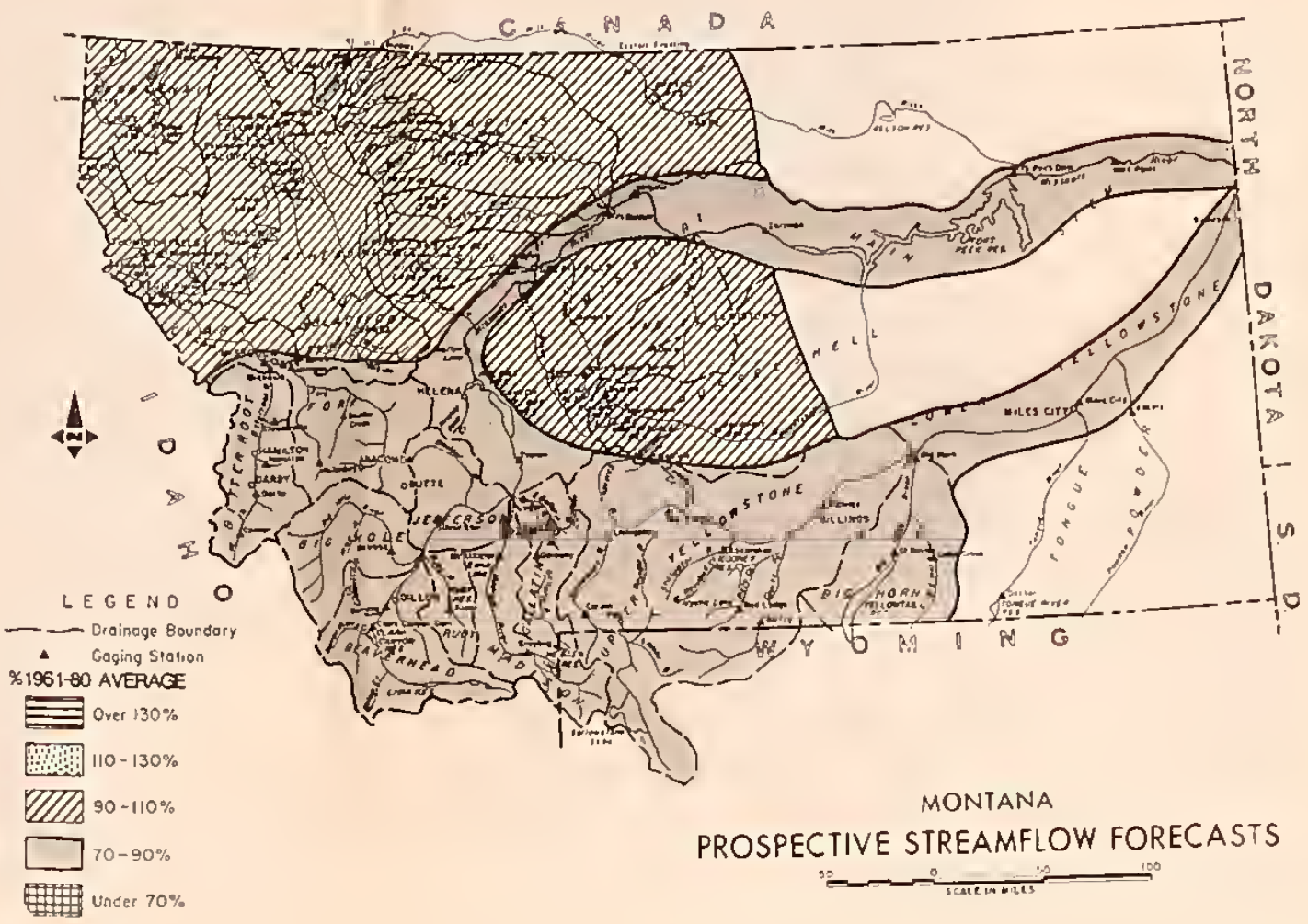
Snowpack generally below average

The snowpack in the mountain headwaters in the northern half of the state is generally near average. The southern half has below to well below average snow cover.

The only area showing above average snowpack is the Bear Paw Mountains near Havre.

Well below average snow water content exists in the Rock, Flint, and Boulder Creek areas near Philipsburg, the Bridger Range near Bozeman and the lower Rock and lower Clark's Fork River areas near Red Lodge.

Snowpack is below average over most of the other drainages in the southern half of Montana.



Missouri River & Hudson Bay Drainages

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	PERIOD	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
		APRIL - SEPTEMBER				APRIL - JULY			
RED ROCK RIVER near Monida (1)		92.0	89	244	103	86.0	89	212	96.3
BEAVERHEAD RIVER near Grant (2)		136	86	435	158	122	89	337	137
BEAVERHEAD RIVER at Barratts (2)		180	86		209	159	88		180
RUBY RIVER near Alder		87.5	86		101	73.5	86		84.6
BIG HOLE RIVER near Melrose		682	90		760	630	90		698
WILLOW CREEK near Harrison		16.6	83		20.0	15.0	84		17.8
MADISON RIVER near Cravling (3)		415	84	575	496	330	85	440	388
MADISON RIVER near McAllister (4)		705	83	1,114	848	570	85	874	672
GALLATIN RIVER near Gateway		458	84		545	390	84		464
SUM OF EAST+WEST FORKS HYALITE CR. nr Bozeman (5)		23.0	82		28.0	19.5	81		24.2
HYALITE CREEK near Bozeman (6)		37.2	83		44.8	32.0	83		38.7
GALLATIN RIVER at Logan		485	79		611	415	79		523
MISSOURI RIVER at Toston (7)		2,125	84	3,827	2,545	1,890	86	3,179	2,196
SHEEP CREEK near White Sulphur Springs		19.8	91		21.8	17.5	92		19.0
SUN RIVER at Gibson Dam (8)		535	94	336	570	490	94	296	522
BELT CREEK near Monarch		125	93		134	116	94		123
MISSOURI RIVER at Fort Benton (9)		3,300	83		3,980	2,980	86		3,468
TWO MEDICINE CREEK near Browning (10)		235	95		248	225	96		235
BADGER CREEK near Browning		121	93		130	105	93		113
INFLOW SWIFT RESERVOIR near Dupuyer		81.5	94		86.7	71.0	95		74.7
CUT BANK CREEK at Cut Bank		109	96		114	100	93		108
MARIAS RIVER near Shelby		509	94		542	477	92		518
MISSOURI RIVER at Virgelle (11)		3,875	85		4,570	3,465	86		4,030
MISSOURI RIVER near Landusky (11)		4,295	86		4,980	3,770	86		4,383
NORTH FORK MUSSELSHELL RIVER near Delpine		6.0	94		6.4	5.1	95		5.4
SOUTH FORK MUSSELSHELL RIVER above Martinsdale		57.5	92		62.8	54.7	93		58.9
MISSOURI RIVER below Fort Peck Dam (11)		4,200	85		4,961	3,810	86		4,428
MILK RIVER at Eastern Crossing (March-Sept.)		103	95		109				
MILK RIVER at Eastern Crossing (12) (March-Sept.)		272	98		279				
INFLOW LAKE SAKAKAWEA, ND (11)		10,715	84		12,755	10,500	86		12,239
SASKATCHEWAN RIVER BASIN									
SWIFTCURRENT CREEK at Sherburne (13)		130	102	102	128	113	101	87.4	112
ST. MARY'S RIVER near Babb (13)		490	101		487	415	100		416

(1) Adjusted for storage in Lima Reservoir.
(2) Adjusted for storage in Lima and Clark Canyon Reservoirs.
(3) Adjusted for storage in Hebgen Lake.
(4) Adjusted for storage in Hebgen Lake and Ennis Lake.
(5) Sum of West Fork Hyalite Creek and East Fork Hyalite Creek above the Reservoir.
(6) Adjusted for storage in Middle Creek Reservoir.
(7) Adjusted for storage in Lima, Hebgen, Ennis & Clark Canyon Reservoirs.
(8) Adjusted for storage in Gibson Reservoir & diversions.
(9) Adjusted for storage in Lima, Clark Canyon, Hebgen, Ennis, Gibson, Pishkun, Willow Creek & Canyon Ferry Reservoirs.
(10) Adjusted for storage in Two Medicine Reservoir & diversions in Two Medicine Canal.
(11) Adjusted for all upstream reservoirs.
(12) Flow at Eastern Crossing minus St. Mary's Canal.
(13) Adjusted for storage in Lake Sherburne.

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

NOTE:
According to the Bureau of Reclamation; although forecasts at this time appear to be near normal - the outlook for water supply is critical because of unusual low storage in Fresno, Nelson and Sherburne.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period: Spring Season	Flow Period: Late Season
Beaverhead	Avg	Fair
Ruby	Avg	Fair
Big Hole	Avg	Fair
Boulder	Avg	Fair
Jefferson	Avg	Fair
Madison	Avg	Fair
Gallatin	Avg	Fair
West-Side Missouri	Avg	Avg
Smith-Belt	Avg	Avg
Sun	Avg	Avg
Teton	Avg	Avg
Marias	Avg	Avg
Judith	Avg	Avg
Musselshell	Avg	Fair
Milk	Avg	Avg
Bear Paws	Exc	Avg
St. Mary's	Avg	Avg

Missouri streamflow forecasts vary

April through September runoff is forecast 10 to 20 percent below average on all headwater streams above Canyon Ferry Reservoir. Streams flowing into the Missouri River downstream are predicted to have spring and summer runoff that is only 5 to 10 percent below average. Runoff in the St. Mary's and Milk River drainages is expected to be near average.

Irrigation water supplies could be a little short in the southwest corner but near average in most other areas.

Most reservoirs that were drawn down last year in the northern areas are expected to refill this spring.

SUMMARY of SNOW MEASUREMENTS
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average
Beaverhead	31	98	83
Ruby	14	82	80
Big Hole	27	119	89
Boulder	15	131	87
Jefferson	87	104	85
Madison	35	104	85
Gallatin	24	89	77
Missouri Headwater	146	101	83
West-side Missouri (Toston-Cascade)	10	153	91
Smith-Belt-Arrow	11	122	93
Missouri Main-stem	21	132	92
Teton & Sun	11	261	98
Marias	6	184	94
Marias-Teton-Sun	17	216	96
Judith-Musselshell	17	109	95
Milk	10	185	114
Bear Paws	6	143	144
Missouri (Total)	211	113	87
Saskatchewan			
St. Mary's	6	178	101
Bow River in Alberta	10	104	83

MISSOURI RIVER & HUDSON BAY DRAINAGES
MONTANA
MOUNTAIN SNOW WATER EQUIVALENT

February snowfall approaches average

Snowfall was about average during February in the headwaters of drainages downstream from Canyon Ferry Reservoir and near to below average in most Missouri River headwater streams.

Presently, the season's snow accumulation is below average over most drainages in the Missouri River headwaters. Exceptions are a small area in the Big Hole and Boulder River drainages near Butte where near average snowpack exists. The Bridger Mountain Range, northeast of Bozeman, has well below average snowpack. Downstream from Canyon Ferry, most drainages have near average snowpack except for the Musselshell River headwaters which is below average. The Bear Paw Mountains, south of Havre, have well above average snowpack levels.

Snowfall activity seemed to increase near the end of February in southern parts of the state. Hopefully, this area will receive enough additional snowfall over the next couple of months to improve the present outlook. If not, most of the southern areas can look for deficient conditions this year.

Yellowstone River Drainage

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	PERIOD	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
		APRIL - SEPTEMBER				APRIL - JULY			
YELLOWSTONE RIVER at Corwin Springs		1,72	85	1,997	2,027	1,436	85	1,622	1,686
YELLOWSTONE RIVER near Livingston		2,00	84		2,379	1,660	84		1,969
POULDER RIVER at Big Timber		32	82		398	300	82		366
STILLWATER near Absarokee (1)		51	83		632	440	83		528
CLARKS FORK RIVER near Belfry		59	80		628	445	79		563
ROCK CREEK near Red Lodge		98	85		115	75.0	85		88.1
INFLOW COONEY RESERVOIR near Boyd (2)		53	88		60.5	44.0	89		49.5
YELLOWSTONE RIVER at Billings		3,78	84	4,262	4,516	3,180	83	3,594	3,833
BIGHORN RIVER near St. Xavier (3)		1,44	85	1,974	1,976	1,500	84	1,688	1,794
LITTLE BIGHORN RIVER near Hardin		16	88		182	140	86		162
TONGUE RIVER near Decker		23	84		269	204	84		244
YELLOWSTONE RIVER at Miles City (4)		5,49	83		6,787	4,845	82		5,906
POWDER RIVER at Moorhead		20	76		263	185	76		243
YELLOWSTONE RIVER near Sidney (5)		6,11	82		7,518	5,365	82		6,544

(1) Adjusted for storage in Mystic Lake.
(2) Adjusted for storage in Cooney Reservoir.
(3) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake, Pilot Butte and Bighorn Reservoirs.
(4) Adjusted for storage in Bull Lake, Buffalo Bill, Boysen, Pilot Butte, Bighorn and Tongue River Reservoirs.
(5) Adjusted for reservoirs shown in (4) and diversions into the Lower Yellowstone Canal.

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

WATER SUPPLY OUTLOOK

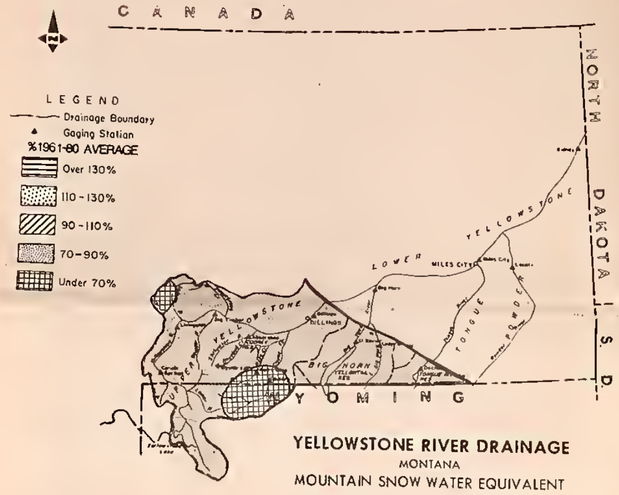
Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period: Spring Season	Flow Period: Late Season
Yellowstone at Livingston	Avg	Fair
Shields	Avg	Fair
Boulder	Avg	Fair
Sweetgrass - Big Timber	Avg	Fair
Stillwater	Avg	Fair
Rock Creek	Avg	Fair
Clark's Fork	Avg	Fair
Yellowstone above Bighorn	Avg	Fair
Bighorn	Fair	Fair
Little Bighorn	Avg	Fair
Tongue	Avg	Fair
Powder	Fair	Fair
Lower Yellowstone	Avg	Fair

Low runoffs expected

Spring and summer streamflows are forecast to be 15 to 20 percent below average over most of the Yellowstone River drainage.

If weather patterns do not improve, some shortages of irrigation water supplies can be expected in mid- to late summer.



YELLOWSTONE RIVER DRAINAGE
MONTANA
MOUNTAIN SNOW WATER EQUIVALENT

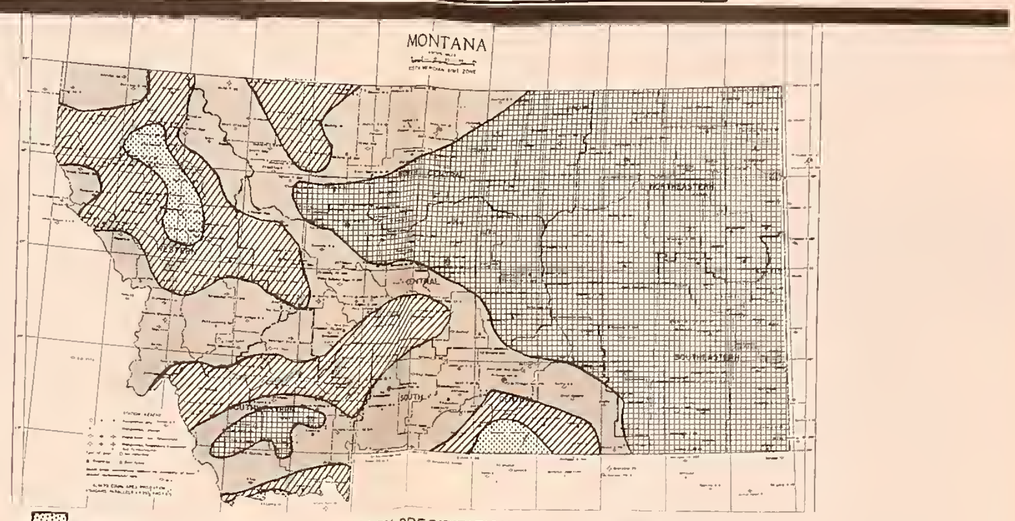
SUMMARY of SNOW MEASUREMENTS
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average
Upper Yellowstone ab Livingston	20	106	79
Shields	10	81	72
Boulder & Stillwater	6	116	79
Rock Creek & Clark's Fork	16	104	77
Yellowstone (ab Bighorn River)	52	101	77
Bighorn/Wyoming	25	94	75
Little Bighorn	3	100	78
Tongue	7	109	87
Powder	4	86	63
Yellowstone (Total)	88	100	77

Yellowstone snowpack remains below average

The mountain snowpack is generally below average throughout the Yellowstone drainage. Snowfall during February was near to a little below average across the headwaters but was not heavy enough to make up for last month's deficiencies.

Parts of the lower Rock Creek and lower Clark's Fork River drainages near Red Lodge still have well below average snow.



VALLEY PRECIPITATION
FEBRUARY 1985

Source: NWS Great Falls, MT

SNOW SURVEY DATA

MONTANA

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
ABUNDANCE LAKE	8800	2/24/85	54	15.5	13.4	17.6
AMBROSE	6480	2/28/85	41	10.8	8.2	11.8
ARCH FALLS	7350	2/26/85	39	9.0	9.4	10.7
ASHLEY DIVIDE	4820	3/01/85	32	8.2	3.3	6.9
ASHLEY LAKE	4000	3/01/85	27	6.2	3.3	6.3
BADGER PASS	6900	3/07/85	105	34.0	19.7	35.3
BADGER PASS BUTYL	6900	3/01/85	---	24.1	16.6	32.4
BALD EAGLE PEAK	5700	2/26/85	155	60.9	33.2	54.8
BALD RIDGE	7500	2/28/85	36	9.1	10.5	11.3
BANFIELD MOUNTAIN	5600	2/26/85	58	19.7	9.0	21.6
BANFIELD MTN BUTYL	5600	3/01/85	---	16.6	8.6	17.0
BAREE CREEK	5500	2/28/85	102	41.1	24.6	42.5
BAREE MIDWAY	4600	2/28/85	95	36.3	14.5	33.4
BAREE TRAIL	3800	2/28/85	37	11.3	2.5	9.6
BARKER LAKES BUTYL	8250	3/01/85	---	11.4	8.9	13.1
BASIN CREEK	7180	2/26/85	30	7.2	4.7	6.7
BASIN CREEK METAL	7180	3/01/85	---	5.9	5.0	6.0
BASSOO PEAK	5150	2/28/85	38	11.7	3.2	9.7
BEAGLE SPRINGS	8850	2/23/85	28	5.2	5.8	7.2
BEAGLE SPGS METAL	8850	3/01/85	---	6.4	6.5	6.5
BEAR BASIN	8150	2/28/85	51	13.7	16.0	18.8
BEAR PAW SKI AREA	5200	2/27/85	31	10.2	7.0	6.8
BEAVER LAKE	5900	3/07/85	68	19.5	10.4	21.0
BERRY MEADOW	7000	2/26/85	24	5.8	4.8	7.2
BIG CREEK	6750	3/06/85	109	37.4	29.4	39.1
BIG SKY	7700	2/27/85	47	12.3	12.6	13.5
BIG SKY MEADOW	6350	2/28/85	33	7.3	9.6	9.0
BIG SNOWY	7150	2/26/85	61	18.6	19.2	18.2
BLACK BEAR	7950	2/28/85	90	32.6	30.0	35.3
BLACK BEAR BUTYL	7950	3/01/85	---	28.2	25.8	31.6
BLACK PINE	7100	2/22/85	32	8.0	6.8	12.5
BLACK PINE BUTYL	7100	3/01/85	---	8.2	8.0	12.5
BLOODY DICK	7600	2/28/85	38	9.7	9.2	12.1
BLOODY DICK BUTYL	7550	3/01/85	---	9.4	5.4	10.7
BLUE LAKE	5900	3/07/85	80	25.0	11.9	23.7
BOTS SOTS	7750	2/28/85	27	6.9	5.9	6.6
BOULDER MOUNTAIN	7950	2/25/85	53	14.9	15.2	16.9
BOULDER MTN BUTYL	7950	3/01/85	---	15.7	16.3	18.2
BOX CANYON METAL	6700	3/01/85	---	8.5	6.2	8.1
BRANHAM LAKES	8850	3/01/85	---	22.0 E	25.6	25.7
BRIDGER BOWL	7250	2/25/85	58	16.2	20.2	24.0
BRIDGER BOWL BUTYL	7250	2/25/85	---	14.2	17.8	22.0
BRISTOW CREEK	3900	2/26/85	35	11.5	4.2	11.6
BRUSH CREEK TIMBER	5000	2/28/85	36	10.1	5.0	9.4
BULL MOUNTAIN	6600	2/28/85	24	5.8	4.1	5.2
CABIN CREEK	5200	2/25/85	32	7.6	.1	6.8
CALL ROAD	8050	2/23/85	33	7.2	10.0	10.0
CALVERT CREEK	6430	2/27/85	35	8.2	6.6	10.5
CALVERT CREEK BUTYL	6430	3/01/85	---	6.7	4.9	8.8
CAMP MISERY	6400	2/26/85	125	45.2	37.6	42.5
CAMP SENIA	7890	2/28/85	20	4.9	4.7	5.1
CARROT BASIN	9000	2/27/85	76	23.0	26.0	31.7
CARROT BASIN BUTYL	9000	3/01/85	---	18.0	21.2	24.[illegible]
CARTER CREEK	7400	3/01/85	16	3.3	4.8	3.8
CASNE CREEK METAL	7800	3/01/85	---	7.2	7.4	6.8
CEDAR GROVE	3760	2/26/85	48	16.0	5.9	11.4
CHESSMAN RESERVOIR	6200	2/25/85	23	4.4	1.0	3.5
CHICKEN CREEK	4060	2/27/85	48	15.0	8.5	15.0
CLOVER MEADOW	8600	2/23/85	45	11.0	13.2	14.6
CLOVER MEADOW METAL	8800	3/01/85	---	11.9	15.6	13.5
COLE CREEK	7850	2/26/85	41	10.1	13.0	14.3
COLE CREEK BUTYL	7850	3/01/85	---	9.2	12.5	12.6
COLLEY CREEK	6300	2/27/85	28	5.4	5.0	7.8
COMBINATION	5600	2/22/85	16	3.0	3.6	5.7
COMBINATION BUTYL	5600	3/01/85	---	4.0	3.7	5.3
COOKE STATION	8150	2/27/85	50	14.1	11.6	17.8
COPPER BOTTOM	5200	3/05/85	55	14.7	5.4	11.0
COPPER BOTTOM BUTYL	5200	3/01/85	---	12.1	6.0	11.5
COPPER CAMP BUTYL	6950	3/01/85	---	26.9	13.8	33.6
COPPER CAMP	6950	3/05/85	77	25.4	12.9	28.3
COPPER CREEK	5700	3/05/85	54	15.4	5.2	14.3
COPPER LAKE CREEK	6100	3/05/85	70	22.8	9.4	22.4
COPPER MOUNTAIN	7700	2/25/85	36	8.4	7.6	9.7
COTTONWOOD CREEK	6400	2/27/85	34	8.3	5.3	6.8
COYOTE HILL	4200	3/01/85	40	11.0	6.8	10.0
CREVICE MOUNTAIN	8400	2/28/85	35	8.4	7.3	9.7
CRYSTAL LAKE	6050	2/26/85	49	12.7	12.2	12.2
CRYSTAL LAKE METAL	6050	3/01/85	---	13.2	11.7	11.0
DAD CREEK LAKE	8400	2/23/85	39	9.3	9.6	11.5
DAISY PEAK	7600	2/28/85	34	7.9	6.2	10.1
DALY CREEK	5780	2/28/85	36	10.0	7.9	10.6
DALY CREEK METAL	5780	3/01/85	---	7.8	3.5	11.4
DARKHORSE LAKE	8600	2/24/85	61	21.3	17.8	22.6
DARKHORSE LK. METAL	8700	3/01/85	---	15.8	17.0	19.6
DAVIS CREEK	5400	2/26/85	59	19.5	12.6	22.5
DEADMAN CREEK	6450	3/04/85	46	11.2	7.3	10.6
DEADMAN CREEK BUTYL	6450	3/01/85	---	9.5	6.6	9.8
DESERT MOUNTAIN	5600	2/25/85	50	14.3	8.9	14.2
DEVILS SLIDE	8100	2/26/85	56	14.8	17.1	19.4
DISCOVERY BASIN	7050	3/01/85	34	7.7	7.4	9.2
DIVIDE	7800	2/23/85	30	6.2	9.6	9.9
DIVIDE BUTYL	7800	3/01/85	---	6.4	8.6	9.2
DIX HILL	6400	2/24/85	35	9.6	6.8	10.7
DUPUYER CREEK BUTYL	5750	3/01/85	---	10.2	3.7	--
EAST FORK R.S.	5400	2/25/85	25	5.6	4.7	6.6
EL DORADO MINE	7800	2/20/85	51	12.5	14.0	18.2
ELK HORN SPRINGS	7800	2/24/85	31	7.6	4.8	8.4
ELK PEAK	8000	2/27/85	46	11.7	11.8	14.7
EMERY CREEK	4350	2/25/85	57	17.6	10.2	14.0
EMERY CREEK BUTYL	4350	3/01/85	---	16.7	9.2	14.4
FATTY CREEK	5500	3/06/85	76	24.2	16.5	20.9
FISH CREEK	8000	2/26/85	32	7.6	5.2	8.2
FISHER CREEK	9100	2/27/85	82	26.9	23.5	34.1
FISHER CREEK BUTYL	9100	3/01/85	---	24.1	22.1	31.6
FIVE-BULL	5700	3/08/85	32	8.2	.2	6.5
FLATTOP MTN BUTYL	6300	3/01/85	---	39.5	28.7	43.0
FLEECER RIDGE	7500	2/28/85	34	8.8	6.3	9.9
FOOLHEN	8280	2/24/85	51	14.0	8.6	15.0
FOUR MILE	6900	3/01/85	32	7.3	5.8	7.4
FOURTH OF JULY	3450	3/01/85	38	12.5	4.4	9.9
FRED BURR PASS	8000	2/26/85	55	14.7	17.6	22.1
FREIGHT CREEK	6000	3/07/85	58	14.2	6.1	13.8
FRIDAY HILL	4620	2/28/85	63	18.6	10.8	22.9
FROHNER MEADOWS	6480	2/25/85	27	5.7	4.2	7.1
FROHNER MDWS BUTYL	6480	3/01/85	---	6.5	5.3	6.7
GARVER CREEK	4250	2/26/85	37	11.2	5.0	10.7
GARVER CREEK BUTYL	4250	3/01/85	---	9.5	4.5	9.5
GIBBONS PASS	7100	2/25/85	62	18.3	17.0	20.7
GOAT MOUNTAIN	7000	2/26/85	39	10.0	3.5	10.2
GOLD CREEK LAKE	7200	2/20/85	39	9.2	9.8	13.5
GOLD STONE	8100	2/28/85	44	12.3	12.0	15.1
GRASSHOPPER	7000	2/27/85	26	5.6	4.1	5.3
GRAVE CREEK	4300	2/26/85	55	17.0	8.9	16.7
GRAVE CRK BUTYL	4300	3/01/85	---	16.2	9.4	16.4
GRIFFIN CREEK DIVIDE	5150	2/28/85	40	12.1	5.0	11.1
GUNSIGHT LAKE	6300	3/07/85	98	35.0	24.5	36.9
HAND CREEK	5030	2/28/85	44	13.1	6.8	12.7
HAND CREEK BUTYL	5030	3/01/85	---	11.1	5.7	13.6
HAWKINS LAKE	6450	2/26/85	69	25.4	15.9	28.2
HAWKINS LAKE BUTYL	6450	3/01/85	---	20.7	13.2	26.8
HEART LAKE TRAIL	4800	3/01/85	69	22.8	13.2	20.3
HEBGEN DAM	6550	2/26/85	38	8.9	10.8	11.3
HELL ROARING DIVIDE	5770	2/27/85	78	26.2	20.5	28.4
HERRIG JUNCTION	4850	2/27/85	69	22.7	14.4	24.4
HOLBROOK	4530	2/28/85	35	9.2	4.5	9.6
HOOD MEADOW	6600	2/26/85	35	7.9	8.0	9.6
HOODOO BASIN	6050	3/01/85	117	48.2	33.2	44.6
HOODOO BASIN BUTYL	6050	3/01/85	---	38.2	26.3	40.0
HOODOO CREEK	5900	3/01/85	108	42.1	30.0	41.8
INDEPENDENCE	7850	3/04/85	60	15.9	11.1	16.8
INTERGAARD	6450	2/26/85	25	5.2	4.2	7.6
JAHNKE LAKE TRAIL	7200	2/28/85	34	7.6	6.6	8.9
JOHNSON PARK	6450	2/28/85	22	5.0	3.2	7.2
KEELER CREEK	3300	2/26/85	54	18.6	5.8	14.3
KINGS HILL	7500	3/04/85	58	14.4	9.0	12.2
KISHENEHN	3890	3/01/85	34	8.0	3.3	8.3
KIWANIS CAMP	3720	2/27/85	12	2.6	2.2	2.1
KRAFT CREEK METAL	4750	3/01/85	---	12.9	9.2	12.5
LAKE CREEK	6100	2/23/85	29	6.0	7.8	8.0
LAKEVIEW CANYON	6930	2/25/85	33	7.9	6.8	10.4
LAKEVIEW RIDGE	7400	2/25/85	32	7.8	7.0	9.3
LAKEVIEW RDG. METAL	7400	3/01/85	---	10.5	8.6	10.7
LEMHI PASS	7480	2/24/85	30	6.0	6.1	8.0
LEMHI RIDGE	8100	2/24/85	33	7.5	7.2	8.9
LEMHI RIDGE BUTYL	8100	3/01/85	---	7.4	5.1	9.0
LICK CREEK	6860	2/27/85	39	8.4	8.7	8.8
LICK CREEK BUTYL	6860	3/01/85	---	7.8	7.1	7.7
LITTLE PARK	7400	2/28/85	43	10.4	12.2	14.4
LOGAN CREEK	4300	2/28/85	30	7.4	3.3	7.4
LONE MOUNTAIN	8880	2/27/85	59	17.4	18.4	19.6
LOST HORSE	5940	2/27/85	76	26.7	21.8	29.5
LOST SOUL	4800	2/26/85	49	15.2	6.4	15.0
LOWER TWIN	7900	3/01/85	57	18.1	16.1	18.6
LOWER TWIN METAL	7900	3/01/85	---	12.4	14.4	17.1
LUBRECHT FLUME	4680	2/27/85	18	4.2	1.6	5.8
LUBRECHT FLUME BUTYL	4680	3/01/85	---	4.7	3.2	5.2
LUBRECHT FOREST NO 3	5450	2/27/85	21	4.3	3.6	7.0
LUBRECHT FOREST NO 4	4650	2/27/85	10	2.3	1.2	3.5
LUBRECHT FOREST NO 6	4040	2/28/85	11	3.0	.9	4.2
LUBRECHT HYDROPLOT	4200	2/27/85	16	4.0	3.0	6.6
MADISON PLATEAU	7750	2/28/85	60	19.9	15.3	19.4
MADISON PLT BUTYL	7750	2/28/85	---	18.1	14.1	20.6
MANY GLACIER	4900	3/01/85	63	20.6	9.6	18.8
MANY GLACIER BUTYL	4900	3/01/85	---	16.7	9.2	17.8
MARIAS PASS	5250	3/01/85	58	19.0	7.2	15.9
MAYNARD CREEK	6210	2/25/85	40	9.5	10.7	14.1
MAYNARD CREEK BUTYL	6210	2/25/85	---	6.6	7.8	10.5
MIDDLE MILL CREEK	7850	3/01/85	---	13.0 E	14.9	14.5
MILL CREEK	7500	2/27/85	40	8.7	--	11.7
MINERAL CREEK	4000	2/27/85	60	17.1	9.8	17.1
MONUMENT PEAK	8850	3/04/85	67	17.5	17.3	23.9
MONUMENT PEAK METAL	8850	3/01/85	---	13.7	12.7	19.8
MOULTON RESERVOIR	6850	2/28/85	28	6.0	5.1	6.9
MOUNT LOCKHART	6400	2/27/85	67	20.2	10.6	20.8
MT LOCKHART BUTYL	6400	3/01/85	---	17.1	9.6	19.0
MUDD LAKE	7650	2/26/85	52	15.1	11.4	18.0
MULE CREEK	8300	2/24/85	42	11.3	8.8	11.3
MULE CREEK METAL	8300	3/01/85	---	10.8	9.3	11.4
NEVADA CREEK	6480	3/05/85	52	13.1	6.7	11.1
NEVADA CREEK METAL	6480	3/01/85	---	12.2	6.0	10.7
NEW WORLD	6900	2/25/85	50	11.0	11.4	13.0
NEWTON MOUNTAIN	5600	2/28/85	87	34.6	20.4	33.7
NEZ PERCE CAMP	5650	2/26/85	44	12.6	11.4	13.7
NEZ PERCE CMP BUTYL	5650	3/01/85	---	11.9	11.1	13.6
NEZ PERCE CREEK	6600	2/25/85	24	3.8	4.3	6.6
NEZ PERCE PASS	6570	2/26/85	46	13.4	14.0	15.4
NOISY BASIN	6040	2/25/85	118	40.4	36.8	37.9
NOISY BASIN BUTYL	6040	3/01/85	---	35.1	30.9	33.1
NORTH FORK ELK CREEK	6250	2/27/85	39	10.5	6.3	11.0
N.FORK ELK CRK BUTYL	6250	3/01/85	---	9.7	6.7	10.5
NORTH FORK JOCKO	6330	3/06/85	105	33.8	31.6	40.8
NORTH MEADOW	7500	3/01/85	27	6.4	5.8	7.2
NORTHEAST ENTRANCE	7350	2/28/85	25	6.2	5.9	9.0
N.E. ENTRANCE BUTYL	7350	3/01/85	---	6.3	5.7	8.8
NOTCH	8500	2/23/85	38	8.8	15.6	13.6
OPHIR PARK	7150	2/24/85	45	13.3	11.4	15.4
PETERSON MEADOWS	7200	2/25/85	34	8.0	6.2	9.0
PETERSON MDW BUTYL	7200	2/25/85	---	7.7	6.4	8.7
PICKFOOT CREEK	6650	2/25/85	34	8.2	7.2	11.5
PICKFOOT CRK METAL	6650	3/01/85	---	9.4	6.5	10.2
PIKE CREEK BUTYL	5930	3/01/85	---	25.1	12.9	24.3
PIPESTONE PASS	7200	2/25/85	21	4.6	3.0	4.4
PLACER BASIN METAL	8830	3/01/85	---	12.5	10.8	14.8
POORMAN CREEK	5100	2/26/85	94	35.5	19.0	31.7
POORMAN CRK BUTYL	5100	3/01/85	---	34.0	16.0	28.9
PORCUPINE	6500	2/28/85	21	5.4	6.0	6.8
PORCUPINE BUTYL	6500	3/01/85	---	5.7	6.1	6.6
POTOMAGETON PARK	7150	2/26/85	44	10.3	11.1	13.6
RED MOUNTAIN	6000	3/01/85	51	16.8	10.0	17.2
RED TOP	5260	2/28/85	75	27.2	15.3	28.1
ROCK CREEK	5600	2/26/85	41	10.8	11.3	8.3
ROCK CREEK MEADOW	8160	2/26/85	55	13.2	13.8	18.7
ROCKER PEAK	8000	2/26/85	42	10.4	8.3	13.3
ROCKER PEAK BUTYL	8000	3/01/85	---	10.2	6.9	12.6

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
ROCKY BOY	4700	2/27/85	21	6.0	4.4	4.5
ROCKY BOY BUTYL	4700	2/27/85	---	5.5	4.3	4.4
SACAJAWEA	6550	2/25/85	34	8.5	11.5	13.1
SADDLE MOUNTAIN	7940	2/25/85	65	19.2	17.4	22.3
SADDLE MTN BUTYL	7900	3/01/85	---	18.9	17.8	22.6
SENTINEL CREEK	8300	2/25/85	60	14.8	16.8	21.0
SHOWER FALLS	8100	2/26/85	58	15.1	18.4	20.2
SHOWER FALLS BUTYL	8100	3/01/85	---	15.9	18.3	19.1
SILVER RUN	6630	2/26/85	15	3.6	4.7	5.5
SILVER RUN BUTYL	6630	3/01/85	---	3.2	4.6	4.2
SKALKAHO SUMMIT	7250	2/28/85	63	19.8	14.4	23.5
SKALKAHO SUMMIT BTYL	7260	3/01/85	---	17.1	12.6	23.5
SKYLARK TRAIL	6200	3/06/85	88	26.8	--	--
SKYLARK TRAIL METAL	6200	3/01/85	---	26.2	22.2	28.5
SLAG-A-MELT LAKE	8750	2/24/85	64	20.5	17.5	22.3
SLIDE ROCK MOUNTAIN	7100	2/21/85	38	10.1	10.4	14.6
SMUGGLER MINE	6960	3/01/85	---	8.5E	9.0	8.9
SOUTH FORK SHIELDS	8100	2/28/85	52	15.5	22.0	21.2
S.FK. SHIELDS BUTYL	8100	3/01/85	---	11.7	14.4	13.6
SPOTTED BEAR MTN.	7000	3/07/85	50	14.4	8.4	14.2
SPUR PARK	8100	3/04/85	69	18.6	14.1	18.6
SPUR PARK BUTYL	8100	3/01/85	---	17.5	14.4	19.1
STAHL PEAK	6030	2/26/85	92	32.6	25.7	35.9
STAHL PEAK BUTYL	6030	3/01/85	---	27.7	21.6	30.0
STEMPLE PASS	6600	2/27/85	42	9.7	3.8	9.3
STORM LAKE	7780	2/25/85	44	10.8	8.8	11.3
STRYKER BASIN	6180	2/27/85	77	25.2	19.3	31.2
STUART MILL	.6500	2/26/85	23	5.0	3.3	6.2
STUART MOUNTAIN	7400	3/06/85	85	27.6	24.0	28.6
SUCKER CREEK	3960	2/27/85	0	.0	.4	.5
TAYLOR ROAD	4080	2/27/85	20	7.0	3.6	3.4
TEN MILE LOWER	6600	2/26/85	29	6.1	5.1	6.7
TEN MILE MIDDLE	6800	2/26/85	39	8.6	6.2	10.0
TEN MILE UPPER	8000	2/26/85	42	10.2	8.0	12.3
TEPEE CREEK	8000	2/23/85	40	9.3	11.8	13.2
TEPEE CREEK BUTYL	8000	3/01/85	---	8.6	10.6	10.7
TIMBERLINE CREEK	8850	2/28/85	43	10.8	9.2	12.3
TRAIL CREEK	7090	2/24/85	28	5.6	6.0	7.3
TRINKUS LAKE	6100	3/06/85	117	40.0	29.3	38.9
TRUMAN CREEK	4060	3/01/85	23	6.2	2.6	3.5
TV MOUNTAIN	6800	3/06/85	54	15.5	12.9	16.8
TWELVEMILE CREEK	5600	2/27/85	62	20.5	13.8	20.9
TWELVEMILE BUTYL	5600	3/01/85	---	15.7	11.3	17.3
TWENTY-ONE MILE	7150	2/27/85	48	13.5	10.8	16.3
TWIN CREEKS	3580	3/07/85	43	12.5	5.7	11.7
TWIN LAKES	6510	2/27/85	92	33.4	27.2	37.7
TWIN LAKES BUTYL	6400	3/01/85	---	29.5	24.8	36.9
UPPER HOLLAND LAKE	6200	3/06/85	92	30.0	23.2	32.7
WALDRON	5600	2/27/85	37	10.0	2.4	10.1
WALDRON BUTYL	5600	3/01/85	---	9.8	4.3	9.6
WARM SPRINGS	7800	2/26/85	46	11.7	12.3	19.0
WARM SPRINGS BUTYL	7800	3/01/85	---	12.6	13.6	19.2
WEASEL DIVIDE	5450	2/26/85	88	30.9	18.1	31.4
WEST ROSEBUD	7500	2/27/85	25	5.6	5.2	9.9
WEST YELLOWSTONE	6700	2/27/85	41	10.7	8.7	11.2
WEST YELL'ST BUTYL	6700	2/27/85	---	8.0	6.9	8.8
WHISKEY CREEK	6800	2/28/85	56	17.5	13.3	17.9
WHISKEY CREEK BUTYL	6800	3/01/85	---	13.4	10.5	14.7
WHITE MILL	8700	2/27/85	65	19.6	16.7	24.9
WHITE MILL BUTYL	8700	3/01/85	---	16.8	14.9	21.3
WHITE PINE RIDGE	8850	2/23/85	18	3.8	5.0	4.6
WILLOW CREEK	6500	2/26/85	29	5.7	7.4	7.7
WOOD CREEK METAL	5960	3/01/85	---	12.8	2.7	11.3
WRONG CREEK	5700	2/23/85	42	12.2	4.7	13.4
WRONG RIDGE	6800	2/24/85	51	16.1	8.3	18.1

ALBERTA

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
AKAMINA CAN.	5810	2/26/85	72	21.2	10.0	15.6
AKAMINA PILLOW CAN.	5810	3/01/85	---	19.1	10.0	--
ALLISON PASS CAN.	6490	2/27/85	50	14.7	9.3	15.3
BOW RIVER CAN.	5080	2/28/85	29	6.4	5.6	8.0
BOW RIVER SUMMIT CAN.	6660	2/27/85	43	11.4	11.2	12.8
CHATEAU LAWN CAN.	5710	2/28/85	33	8.0	6.7	10.2
CUTHEAD LAKE CAN.	7250	2/27/85	40	10.5	12.3	--
HIGHWOOD SUMMIT CAN.	7250	2/26/85	44	12.1	10.0	13.3
GABLE MOUNTAIN CAN.		2/27/85	22	4.7	--	--
GARDINER HEAD. CAN.		2/26/85	76	28.6	--	--
KATHERINE LAKE CAN.	7810	2/27/85	41	10.8	15.0	--
LARCH VALLEY CAN.	7740	2/27/85	43	10.2	13.6	--
LEE CREEK D CAN.		2/27/85	31	7.8	--	7.5
LEE CREEK E CAN.		2/27/85	37	9.4	--	7.0
LEE CREEK F CAN.		2/27/85	26	6.7	--	6.1
LEE CREEK P CAN.		2/27/85	22	5.4	--	6.7
LEE CREEK Q CAN.	4890	2/27/85	31	7.9	--	6.6
LOST CREEK CAN.		2/26/85	49	15.2	--	--
LT. ELBOW SUMM CAN.	7090	2/26/85	42	10.9	7.4	9.2
MARMOT-JASPER CAN.		2/27/85	32	7.4	--	6.7
MCCONNELL CREEK CAN.		2/27/85	26	5.9	--	--
MIRROR LAKE CAN.	6590	2/27/85	32	7.2	9.4	10.2
MOUNT SKOKI CAN.	6740	2/27/85	39	9.1	11.2	--
MUD LAKE CAN.	6200	2/26/85	43	11.5	6.4	--
NIGEL CREEK CAN.	6400	2/26/85	45	11.2	--	14.1
PIPESTONE UPPER CAN.	5300	2/28/85	32	7.9	6.2	8.4
PTARMIGAN HUT CAN.	7150	2/27/85	44	11.1	12.7	13.5
RACEHORSE CREEK CAN.		2/26/85	48	15.4	--	--
SUNSHINE VILLAGE CAN.	7300	2/28/85	59	15.7	16.0	19.3
SUNSHINE PILLOW CAN.	7300	3/01/85	---	15.9	17.4	--
SUNWAPTA FALLS CAN.	4590	2/27/85	27	6.1	--	6.5
THREE ISLE LAKE CAN.	7090	2/28/85	56	17.3	17.9	--
W.CASTLE (BUSH) CAN.	4990	2/26/85	55	15.7	7.8	--

BRITISH COLUMBIA

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
BEAVER FOOT CAN.	6200	2/27/85	26	6.1	4.2	8.5
FERNIE CAN.	3500	2/27/85	34	10.6	1.1	7.8
FERNIE EAST(NEW) CAN.	4100	2/27/85	49	15.8	7.7	13.9
FERNIE NE CAN.	3500	2/27/85	38	12.8	3.6	9.1
FIDELITY MTN. CAN.	6100	2/28/85	115	38.8	35.1	43.1
FIELD CAN.	4200	2/26/85	26	6.1	--	6.4
FLOE LAKE CAN.	6860	2/27/85	72	20.7	20.7	25.2
GLACIER CAN.	4100	2/28/85	74	23.1	19.6	25.8
GRAY CK. LOWER CAN.	5100	3/01/85	51	16.3	13.2	15.7
GRAY CK UPPER CAN.	6270	3/01/85	71	24.1	21.6	27.2
KICKING HORSE CAN.	5400	2/25/85	43	10.0	9.8	12.8
KIMBERLEY CAN.	3810	2/26/85	23	4.8	3.5	7.5
LOWER KIMBERELY CAN.	4500	2/27/85	28	7.3	4.7	8.1
KIMBERLEY MID. CAN.	5510	2/27/85	32	9.6	6.8	11.1
UPPER KIMBERLEY CAN.	7020	2/27/85	44	14.4	10.7	17.8
MARBLE CANYON CAN.	4990	2/27/85	42	13.7	8.7	13.0
MORRISSEY RIDGE CAN.	6100	2/26/85	73	26.0	15.4	26.2
MOUNT ABBOT CAN.	6500	2/25/85	106	33.5	34.0	41.9
MT ASSINIBOINE CAN.	7320	2/27/85	52	14.2	13.4	17.2
MOUNT JOFFRE CAN.	5740	2/27/85	40	11.3	6.7	12.9
MOYIE MTN CAN.	6400	3/01/85	46	13.7	10.4	17.0
SINCLAIR PASS CAN.	4500	2/27/85	19	4.3	2.2	5.6
SULLIVAN MINE CAN.	5090	2/27/85	37	10.7	6.2	11.9
THUNDER CREEK CAN.	6600	2/27/85	32	8.1	5.4	9.3
UPPER ELK RIVER CAN.	4400	2/26/85	20	5.8	.6	6.[illegible]
VERMONT CREEK CAN.	4990	2/27/85	46	13.7	8.7	17.2

IDAHO

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
BEAR MOUNTAIN	5400	2/26/85	136	54.9	32.6	55.3
BEAR MTN SNOTEL	5400	3/01/85	---	53.8	--	--
BIG SPRINGS	6400	3/01/85	57	16.4	15.0	18.8
BLACK CANYON	7960	3/01/85	---	31.9E	26.6	33.2
BLACK MOOSE	8160	3/01/85	---	33.7E	23.8	35.1
CAMP CREEK	6580	2/28/85	34	8.2	6.9	9.3
CRAB CREEK SNOTEL	6860	3/01/85	---	12.1	--	--
HUMBOLDT GULCH	4250	2/25/85	54	17.6	8.4	--
HUMBOLDT GLCH SNOTEL	4250	3/01/85	---	15.4	--	--
ISLAND PARK	6290	3/01/85	52	14.6	13.6	15.3
ISLAND PARK SNOTEL	6290	3/01/85	---	13.4	--	--
KILGORE	6320	2/27/85	34	8.6	11.2	10.7
KIT CARSON PASTURE	4950	2/26/85	33	7.8	8.1	--
LATHAM SPRINGS	7630	2/27/85	70	23.0	25.2	29.4
LOLO PASS	5240	3/01/85	77	25.2	17.5	27.4
LOLO PASS SNOTEL	5240	3/01/85	---	26.4	--	--
LOOKOUT	5140	2/25/85	98	34.5	19.2	30.4
LUCKY DOG	6860	2/27/85	60	19.6	20.6	22.2
MOOSE CREEK	6200	2/27/85	47	13.0	15.6	15.1
MOOSE CR SNOTEL	6200	3/01/85	---	11.3	--	--
MOSQUITO RIDGE	5200	2/27/85	94	36.2	22.4	34.1
MOSQUITO SNOTEL	5200	3/01/85	---	34.4	--	--
SAVAGE PASS	6170	3/01/85	72	23.6	16.9	24.3
SAVAGE PASS SNOTEL	6170	3/01/85	---	22.8	--	--
SAWTELL MOUNTAIN	8720	3/01/85	80	26.0	27.3	28.8
SUNSET	5540	2/26/85	76	26.4	24.6	28.6
SUNSET SNOTEL	5540	3/01/85	---	30.7	--	--
TARGHEE PASS	6980	3/01/85	---	12.9E	9.3	13.4
VALLEY VIEW	6680	3/01/85	50	14.4	10.3	15.2
WHITE ELEPHANT	7710	3/01/85	62	18.8	16.2	21.0
WHITE ELEPHANT SNTEL	7710	3/01/85	---	19.3	--	21.8

WYOMING

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
BALD MOUNTAIN	9380	2/27/85	---	13.0E	15.9	19.2
BALD MOUNTAIN SNOTEL	9380	3/01/85	---	13.7	14.9	--
BEARTOOTH LK. SNOTEL	9280	3/01/85	---	14.6	12.3	--
BURGESS RANGER STA	7880	2/27/85	33	6.7	5.4	6.9
BURGESS JCT. SNOTEL	7880	3/01/85	---	8.8	--	--
CANYON	7940	2/28/85	44	11.2	8.3	14.3
CANYON SNOTEL	7940	3/01/85	---	11.1	8.3	14.3
EAST ENTRANCE	6960	2/28/85	33	8.9	5.5	[illegible]
EVENING STAR SNOTEL	9200	3/01/85	---	18.8	21.6	--
LAKE CAMP	7780	2/27/85	34	7.5	7.0	8.5
LUPINE CREEK	7380	3/01/85	37	8.9	5.5	9.7
NORRIS BASIN (OLD)	7500	2/28/85	36	8.2	5.8	10.0
NORRIS BASIN (NEW)	7500	2/28/85	37	8.1	5.8	--
NORTH TONGUE	8450	2/27/85	42	9.6	8.1	11.4
OLD FAITHFUL	7400	3/03/85	52	14.1	8.6	14.5
PARKERS PEAK SNOTEL	9400	3/01/85	---	14.0	15.2	28.1
SYLVAN LAKE SNOTEL	8420	3/01/85	---	17.5	16.7	--
SYLVAN PASS	7100	2/28/85	40	10.6	7.5	12.4
THUMB DIVIDE	7980	2/27/85	59	18.2	12.2	18.1
TOGWOTEE PASS	9580	2/28/85	68	20.5	21.6	25.2
TOGWOTEE PASS SNOTEL	9580	3/01/85	---	18.0	17.5	--
TROUT CREEK SNOTEL	8400	3/01/85	---	7.1	5.2	--
TWO OCEAN SNOTEL	9160	3/01/85	---	18.5	17.8	27.2
WOLVERINE	7650	2/27/85	33	7.6	6.4	11.8
WOLVERINE SNOTEL	7650	3/01/85	---	7.1	6.4	--
YOUNTS PEAK AM	8350	3/01/85	39	10.5	--	17.6
YOUNTS PEAK SNOTEL	8350	3/01/85	---	12.9	15.1	17.6

****

SCS Snow Surveyors enroute to snow course.

Columbia River Drainage

STREAMFLOW FORECASTS

BASIN STREAM and/or FORECAST POINT	PERIOD	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
		APRIL - SEPTEMBER				APRIL - JULY				APRIL - JUNE			
KOOTENAI RIVER below Libby Dam (1)		6,340	90	5,466	7,041	5,360	89	4,520	6,020				
FISHER RIVER near Libby		269	102		264	255	103		248				
YAAK RIVER near Troy		470	90		523	450	90		500				
KOOTENAI RIVER at Leonia (1)		7,990	93	6,534	8,602	6,900	92	5,596	7,498	5,565	92	4,282	6,051
INFLOW MOULTON RESERVOIR nr Butte (Million Gallons)						220	84	182	263	200	84	179	237
WARM SPRINGS CREEK AT MEYERS DAM near Anaconda (2)		40.0	86		46.8	33.0	86		37.8				
FLINT CREEK near Southern Cross (3)		15.4	84	26.3	18.3	13.0	84	21.3	15.4				
FLINT CREEK below Boulder Creek (4)		62.2	82		75.8	49.0	82		59.5				
INFLOW LOWER WILLOW CREEK RESERVOIR near Hall (5)		11.8	75	11.6	15.7	11.2	74	10.2	14.9				
MIDDLE FORK ROCK CREEK near Philipsburg		66.3	85		78.2	60.0	85		70.5				
NEVADA CREEK near Finn		20.1	87		23.0	18.6	87		21.3				
BLACKFOOT RIVER near Bonner		910	91		999	830	92		904	720	92		782
CLARK FORK RIVER above Milltown (6)		685	84		816	595	84		708	500	84		597
CLARK FORK RIVER above Missoula		1,595	87	1,565	1,815	1,425	88	1,360	1,612	1,220	89	880	1,379
WEST FORK BITTERROOT RIVER near Conner (7)		155	87		178	145	88		164				
BITTERROOT RIVER near Darby		512	88		580	475	89		532	419	90		464
SKALKAHO CREEK near Hamilton		50.0	89		56.0	43.8	90		48.7				
BURNT FORK CREEK near Stevensville (8)		33.2	89		37.4	29.0	90		32.2				
BITTERROOT RIVER at Missoula (9)		1,350	90		1,504	1,245	90		1,384	1,070	90		1,191
CLARK FORK RIVER below Missoula		2,945	89		3,319	2,670	89		2,996	2,290	89		2,570
CLARK FORK RIVER at St. Regis		4,050	92	3,732	4,411	3,615	92	3,322	3,928	3,155	92	2,825	3,428
NORTH FORK FLATHEAD RIVER near Columbia Falls		1,790	94		1,913	1,625	94		1,732	1,380	94		1,471
MIDDLE FORK FLATHEAD RIVER near West Glacier		1,790	96	1,316	1,869	1,660	97	1,236	1,713	1,400	96	1,086	1,453
SOUTH FORK FLATHEAD RIVER near Columbia Falls (10)		2,230	98	1,515	2,278	2,100	98	1,694	2,142	1,850	98	1,416	1,886
FLATHEAD RIVER at Columbia Falls (10)		5,930	96	4,738	6,208	5,440	97	4,294	5,721	4,800	97	3,589	4,921
SWAN RIVER near Big Fork		645	94		689	570	94		604				
FLATHEAD RIVER near Polson (11)		7,020	96	5,586	7,278	6,535	97	5,102	6,712	5,570	97	4,284	5,759
CLARK FORK RIVER near Plains (11)		11,500	95	9,695	12,153	10,520	95	8,914	11,071	8,990	95	7,457	9,459
THOMPSON RIVER near Thompson Falls		250	96		261	225	97		233				
PROSPECT CREEK at Thompson Falls		145	102		142	135	102		132				
CLARK FORK RIVER at Whitehorse Rapids (12)		12,900	95		13,575	11,735	95		12,351	10,050	95		10,570

(1) Adjusted for storage in Lake Koocanusa.
(2) Adjusted for storage in Silver Lake, diversions to and pumping from Georgetown Lake.
(3) Adjusted for storage in Georgetown Lake, diversions from and pumping to Silver Lake.
(4) Sum Flint Creek at Maxville and Boulder Creek at Maxville.
(5) Sum of North Fork Lower Willow Creek near Hall and South Fork Lower Willow Creek near Hall.
(6) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.
(7) Adjusted for storage in Painted Rocks Reservoir.
(8) Adjusted for diversion into Sunset Highline Canal.
(9) Difference in observed flow Clark Fork above and below Missoula.
(10) Adjusted for storage in Hungry Horse Reservoir.
(11) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
(12) Adjusted for storage in Hungry Horse Reservoir, Flathead Lake and Noxon Rapids Reservoir.

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

Columbia streamflows a little below average

Streams in the Clark Fork River headwaters above Missoula are forecast to have 10 to 15 percent less runoff than average.

Flathead and Kootenai River tributaries should have runoff near to a little below average.

If current weather patterns continue, some shortages of irrigation water supplies can be expected in the Bitterroot, Blackfoot and Upper Clark Fork River areas.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

STREAM or AREA	Flow Period: Spring Season	Late Season
Tobacco	Avg	Avg
Little Bitterroot	Avg	Avg
Mission Valley	Avg	Avg
Flint Creek	Fair	Fair
Upper Clark Fork	Avg	Fair
Nevada Creek	Avg	Fair
Blackfoot	Avg	Avg
West-side Bitterroot	Avg	Fair
East-side Bitterroot	Avg	Fair
Bitterroot River	Avg	Fair
Lower Clark Fork	Avg	Avg

COLUMBIA RIVER DRAINAGE
MONTANA
MOUNTAIN SNOW WATER EQUIVALENT

SUMMARY of SNOW MEASUREMENTS
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF: Last Year	Average
East Kootenay/BC.	25	135	90
Kootenai/Montana	31	184	100
Kootenai above Bonners Ferry...	56	164	97
Little Bitterroot	9	214	101
N. Fk. Flathead..	13	153	95
M. Fk. Flathead..	12	167	97
S. Fk. Flathead..	13	132	101
Swan	10	118	97
Flathead	56	142	98
Stillwater & Whitefish.....	9	161	93
Clark Fork above Blackfoot	42	123	82
Blackfoot	20	154	91
Upper Clark Fork above Missoula .	62	133	85
Bitterroot	19	122	88
Lower Clark Fork below Missoula .	19	165	105
Clark Fork (Total w/o Flathead)...	100	141	93
Pend O'Reille (Clark Fork & Flatbead)	156	142	95
Columbia (Pend O'Reille & Kootenai)	212	147	95

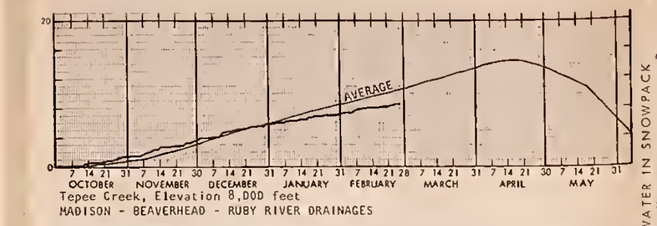
February accumulation near average

Snow accumulation during February was near average in most of the Columbia drainage except for some of the more southern areas.

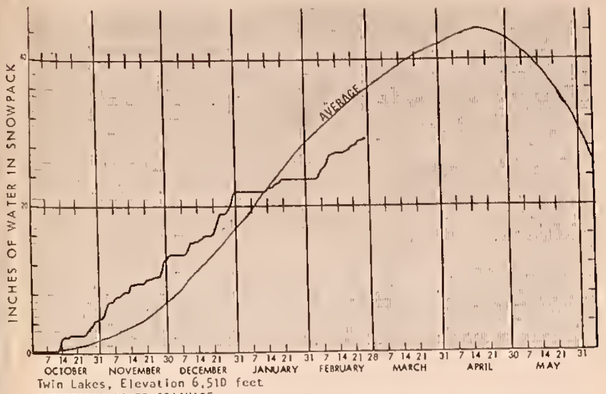
In general, the water of the snowpack is about average in all headwaters north of Missoula and a small tip of the Clark Fork near Butte. Most of the Bitterroot River drainage and the Clark Fork above Missoula have below average snowpack. A small area in the Flint Creek, Boulder Creek, Rock Creek headwaters has a much below average amount of snow water content.

Weather patterns seem to be changing toward a little more precipitation in the southern part of Montana. Hopefully, this condition will continue. If conditions do not improve over the next couple of months, the snowpack for the season will be below normal in most areas upstream from Missoula and some water shortages could develop.

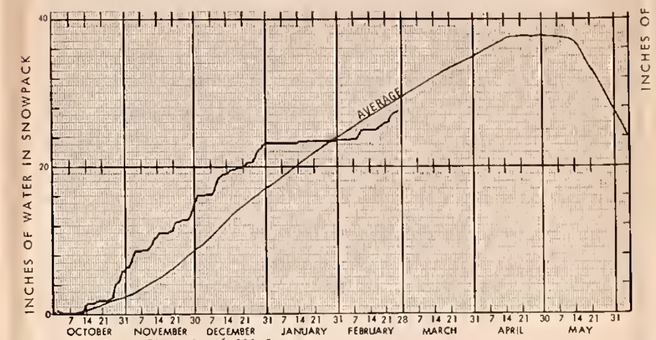
SNOW PILLOW DATA



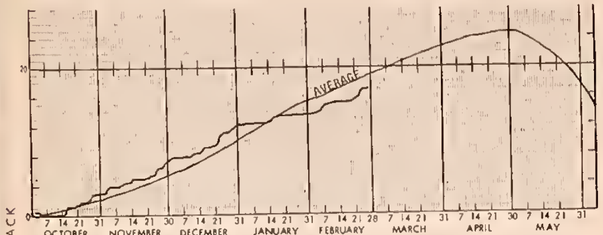
Tepee Creek, Elevation 8,000 feet
MADISON - BEAVERHEAD - RUBY RIVER DRAINAGES



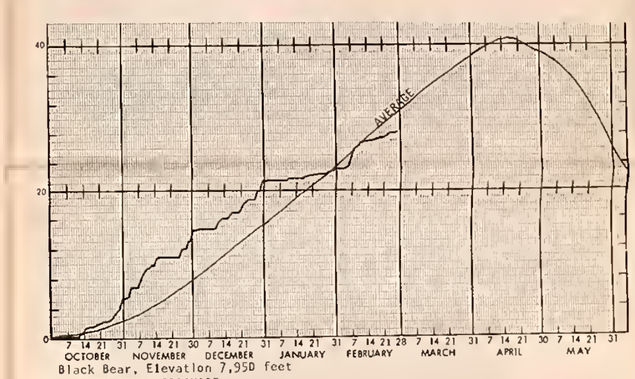
Twin Lakes, Elevation 6,510 feet
BITTERROOT RIVER DRAINAGE



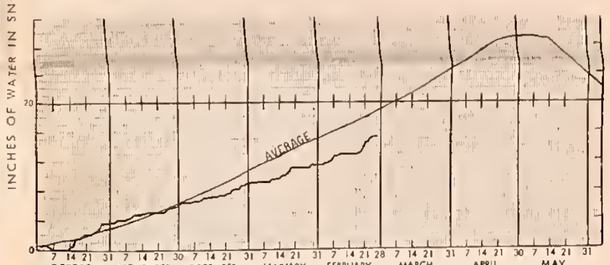
Stahl Peak, Elevation 6,030 feet
KOOTENAI - FLATHEAD RIVER DRAINAGES



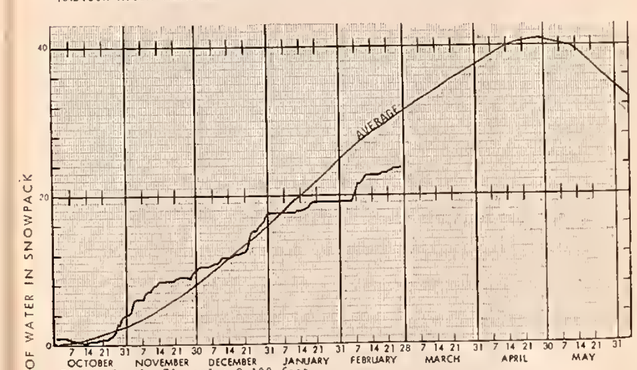
Spur Park, Elevation 8,100 feet
JUDITH RIVER DRAINAGE



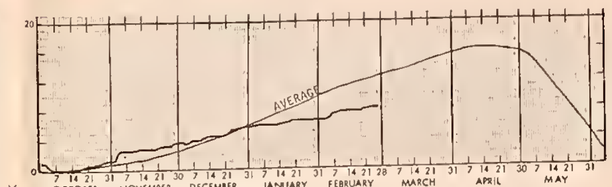
Black Bear, Elevation 7,950 feet
MADISON RIVER DRAINAGE



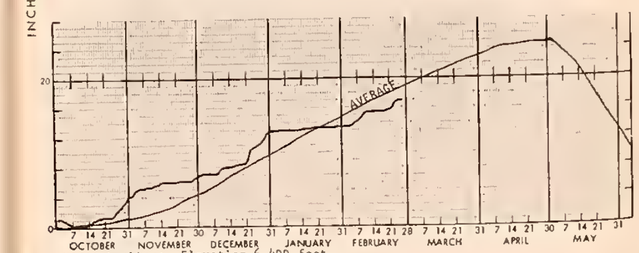
Shower Falls, Elevation 8,100 feet
GALLATIN - YELLOWSTONE RIVER DRAINAGES



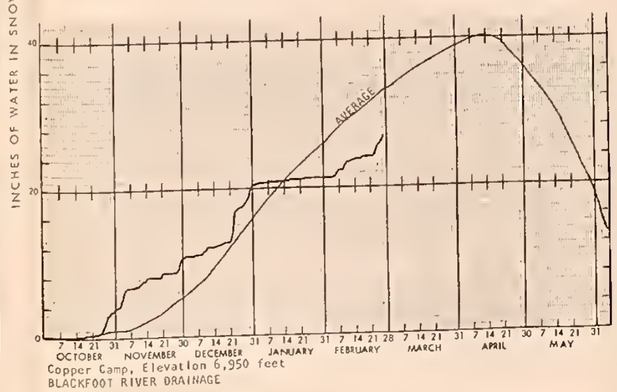
Fisher Creek, Elevation 9,100 feet
YELLOWSTONE - BOULDER - STILLWATER - CLARK'S FORK RIVER DRAINAGES



Black Pine, Elevation 7,100 feet
UPPER CLARK FORK RIVER DRAINAGE



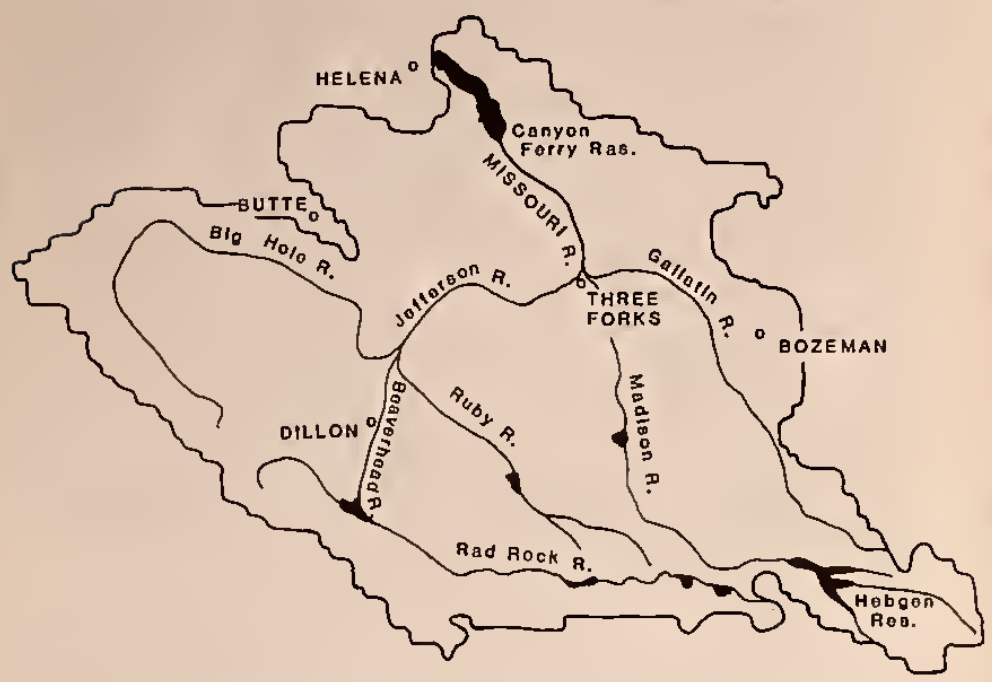
Mount Lockhart, Elevation 6,400 feet
FLATHEAD - MARIAS - TETON RIVER DRAINAGES



Copper Camp, Elevation 6,950 feet
BLACKFOOT RIVER DRAINAGE

SATELLITE SNOW COVER

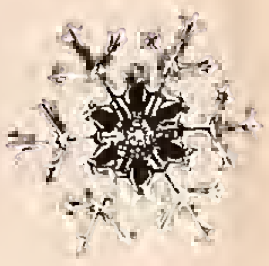
DATA PROVIDED BY NOAA/NWS



☐ Snow Covered Area Scale 1:2,500,000

MISSOURI RIVER BASIN
Above
Canyon Ferry Dam

DATE	PERCENT SNOW COVER	AVERAGE SNOWLINE ELEVATION IN FEET
February 25, 1985	100	3800



AGENCIES AND ORGANIZATIONS COOPERATING IN MONTANA SNOW SURVEYS

GOVERNMENT AGENCIES
- Canada
  - Department of the Environment
    - Atmospheric Environment Service
    - Water Management Service
  - British Columbia Ministry of Environment
    - Inventory and Engineering Branch, Hydrology Section
  - Alberta Environment
    - Technical Services Division
- Federal
  - Department of the Army - Corps of Engineers
  - Department of Agriculture - Forest Service
  - Soil Conservation Service
  - Department of Commerce - National Environmental Satellite Service
  - National Weather Service
  - Department of Interior - Bureau of Indian Affairs
  - Fish and Wildlife Service
  - Geological Survey
  - National Park Service
  - Bureau of Reclamation
  - Department of Energy - Bonneville Power Administration

STATE AGENCIES
- Montana Conservation Districts
- Montana Department of Fish, Wildlife and Parks
- Montana Department of Natural Resources and Conservation
- Montana State University - Agricultural Experiment Station
- University of Montana - School of Forestry

PRIVATE ORGANIZATIONS
- The Anaconda Company
- Big Sky of Montana
- Butte Water Company
- Flathead Valley Community College
- Montana Power Company
- Pondera County Canal & Reservoir Company

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH February 28, 1985

BASIN OR STREAM	RESERVOIR	USABLE CAPACITY	USABLE STORAGE THIS YEAR	USABLE STORAGE LAST YEAR	USABLE STORAGE AVERAGE
	COLUMBIA				
Kootenai	Koocanusa	5,748.2	1,885.0	2,789.0	1,948.0
Flathead	Hungry Horse	3,451.0	2,700.0	2,507.0	2,213.0
	Flathead Lake	1,791.0	746.8	787.4	934.1
	Camas (4)	45.2	17.0	29.5	21.0
	Mission Valley (B)	100.3	36.4	55.4	38.1
Clark Fork	Georgetown Lake	31.0	26.2	27.1	25.2
	Lower Willow Creek	4.9	0.3	3.3	1.6
	Nevada Creek	12.6	---	6.3	4.8
	Noxon Rapids	334.6	316.5	322.8	295.1
Bitterroot	Painted Rocks	31.7	---	---	16.1
	Como	34.9	8.8	23.9	12.6
	MISSOURI				
Beaverhead	Lima	84.0	28.7	55.7	36.1
	Clark Canyon	257.2	147.9	171.8	141.2
Ruby	Ruby	38.8	27.8	27.8	26.7
Madison	Hebgen Lake	377.5	305.2	261.9	224.6
	Ennis Lake	41.0	32.5	31.2	35.7
Gallatin	Middle Creek	8.0	3.8	3.8	3.6
Missouri	Canyon Ferry	2,043.0	1,379.0	1,647.0	1,561.0
	Hauser & Helena	61.9	63.0	63.0	60.1
	Helena Valley	9.2	3.6	3.9	5.1
	Lake Helena	10.4	10.9	10.9	9.9
	Holter Lake	81.9	75.4	79.6	63.6
	Fort Peck Lake	18,910.0	15,570.0	15,900.0	14,830.0
Smith	Smith River	10.6	8.4	9.6	7.0
	Newlan Creek	12.4	9.7	8.6	9.2
Musselshell	Bair	7.0	0.5	3.2	4.7
	Martinsdale	23.1	5.7	14.2	9.5
	Deadman's Basin	72.2	---	---	46.3
Sun	Gibson	99.1	50.9	54.7	43.9
	Willow Creek	32.2	12.6	24.3	20.1
	Pishkun	32.0	18.5	19.4	17.8
Marias	Lower Two Medicine	11.9	---	---	7.0
	Four Horns	19.2	---	---	12.5
	Swift	30.0	9.2	13.1	15.2
	Lake Frances	111.9	23.2	47.2	70.1
Milk	Elwell (Tiber)	1,347.0	668.2	695.0	542.1
	Beaver Creek	3.5	0.9	3.1	1.7
	Fresno	127.2	75.1	24.6	58.5
	Nelson	66.8	12.3	39.1	38.7
	HUDSON BAY				
St. Mary's	Lake Sherburne	64.3	33.3	35.2	21.9
	YELLOWSTONE				
Stillwater	Mystic Lake	21.0	1.4	4.4	7.3
Clark's Fork	Cooney	27.4	19.2	17.1	14.6
Tongue	Tongue River	68.0	10.2	15.2	34.4
Bighorn	Bighorn Lake	1,356.0	854.9	839.0	590.4

Mountain streams will soon be opening up in preparation for spring runoff.

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